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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,444	09/11/2001	Klaus Huenlich	112740-262	4127
29177	7590	10/05/2005	EXAMINER	
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			MERED, HABTE	
			ART UNIT	PAPER NUMBER
			2662	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,444

Applicant(s)

HUENLICH ET AL.

Examiner

Habte Mered

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/11/2001</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-10 are cancelled by the Applicant and substituted with claims 11-20 as stated in the preliminary amendment filed on 11 September 2001.
2. Claims 11-20 are examined.

Specification

3. The disclosure is objected to because of the following informalities:
 - On Page 7, in line 13, the Applicant has not defined what a/b interfaces are adequately and further these interfaces are not considered to be known by one skilled in the art and the interfaces are also not shown in any of the Figures 1-4. Appropriate correction is required.

Claim Objections

4. Claim 19 is objected to because of the following informalities: it is not clear to the Examiner by what is meant by the phrase "tie line" and the use of this phrase is not considered to be known by one skilled in the art. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 11-14, 16, 19, and 20** are rejected under 35 U.S.C. 102(e) as being anticipated by Song (US 6, 289, 018).

Song discloses an ATM switching system that has a subscriber and trunk input/output module where the user data and control data is split and then multiplexed for output purposes.

7. Regarding **claim 11**, Song discloses a method for data transmission between communications devices via a packet-oriented communications network, a method comprising the steps of: providing a time-slot oriented data format (**Column 2, Line 54**), formed from a periodic sequence of channel-specific information segments, for data transmission between the communications devices, the data format having information segments for transmitting signaling information (**Figure 5, element 124**), information segments for transmitting user data information (**Figure 5, element 123**), and information segments for transmitting data-format-specific information (**Column 2, Lines 45-67; B-Channel packet carries the user data and D-Channel data carries the signaling data**); transmitting the information segments intended for transmitting the signaling information in first data packets which are intended for data transmission via the packet oriented communications network(**Figure 5, element 124**); and transmitting the information segments intended for transmitting the user data information in second information segments which are intended for transmitting the data format-specific information(**Figure 5, element 123**), using second data packets which are intended for data transmission via the packet oriented communications network. **(It should be noted here that as shown in Figure 4 Song's system involves a CLAD (Cell Assembly**

Disassembly) right after the user data and the signal data is separated. It is well known to one skilled in the art that cell assembly and disassembly usually involves some form of ATM Adaptation Layer (AAL) protocol. Further, Examiner would like to point out that the Applicant has readily admitted all limitations of this claim as indicated on Page 4, Lines 15-18.)

8. Regarding **claim 12**, Song discloses a method for data transmission between communications devices via a packet-oriented communications network, wherein the second information segments and the, information segments intended for transmitting the signaling information are transmitted jointly in the first data packets. **(In Figure 4, Song shows using the subscriber output module 2B+D data frames are transmitted and using trunk output module 23B+D data frames are transmitted)**

9. Regarding **claim 13**, Song discloses a method for data transmission between communications devices via a packet-oriented communications network, the method further comprising the step of subdividing the first data packets into at least two packet elements, the second information segments being transmitted in the first packet element, and the information segments intended for transmitting the signaling information being transmitted in the second packet element. **(See Figure 10. Song teaches that the B channel packet destined for the same packet may be included in the same ATM cell. See Column 10, Lines 17-25)**

10. Regarding **claim 14**, Song teaches a method for data transmission between communications devices via a packet-oriented communications network, wherein each of the first and second packet elements have a cell header with a length identification,

the length identification defining a number of data items transmitted in the respective packet element. **(See Figure 10, Table 1 and Column 10, Lines 42-55)**

11. Regarding **claim 16**, Song teaches a method for data transmission between communications devices via a packet-oriented communications network, wherein the data transmission via the packet-oriented communications network takes place on the basis of the ATM data format. **(See Figures 4, 9 and 10)**

12. Regarding **claim 19**, Song teaches a method for data transmission between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the signaling information are transmitted via an existing tie line in the packet-oriented communications network. **(In Figures 5,6, and 7 the D-Channel mux and B-channel mux form a V-interface with the B+D interface.)**

13. Regarding **claim 20**, Song discloses a method for data transmission between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the signaling information are transmitted via a packet-oriented communications network using a connection, which is set up, specifically for this data transmission, between the communications devices. **(Column 2, Lines 64-67. Song refers to these connections as special highways and sub-highways.)**

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Song (US 6, 289, 018) in view of Geiger et al (G. Geiger et al, "Integrated Circuits for ISDN-status and future", April 1989, IEEE)

Song teaches all aspects of the claimed invention as set forth in the rejection of claim 11 but fails to teach a method for data transmission between communications devices via a packet-oriented communications network, wherein the timeslot-oriented data format is the standardized IOM-2 data format.

Geiger discloses the IOM-2 ISDN architecture.

Geiger discloses a method for data transmission between communications devices via a packet-oriented communications network, wherein the timeslot-oriented data format is the standardized IOM-2 data format. **(Page 192, Section 4.1 and Figure 4).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Song's apparatus to incorporate IOM-2 data format, the motivation being to have a device that is interoperable with various ISDN industry standards.

16. **Claims 17 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Song (US 6, 289, 018) in view of Duault et al (US 6, 108, 336).

17. Regarding **claim 17**, Song teaches all aspects of the claimed invention as set forth in the rejection of claim 16 but fails to teach a method for data transmission between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the signaling information are transmitted via the packet-oriented communications network in data packets designed in accordance with the fifth ATM adaptation layer agreement.

Duault teaches how to use AAL-5 to perform AAL-1 and Aal-2 functions.

Duault discloses a method for data transmission between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the signaling information are transmitted via the packet-oriented communications network in data packets designed in accordance with the fifth ATM adaptation layer agreement. **(Duault shows that AAL-5 can be used in a network that uses ATM and ISDN interface. See also Column 14 Lines 10-20)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Song's apparatus to incorporate AAL-5 protocol, the motivation being as stated by Song in Column 2, Line 5 some form of adaptation is used in the CLAD and Duault specifies AAL-5 is best because it is easy to implement and is easily available as stated in Duault's Column 5, Lines 36-45.

18. Regarding **claim 18**, Song teaches all aspects of the claimed invention as set forth in the rejection of claim 17 but fails to teach a method for data transmission

between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the user data information are transmitted via the packet-oriented communications network in data packets designed in accordance with the first ATM adaptation layer agreement.

Duault discloses a method for data transmission between communications devices via a packet-oriented communications network, wherein the information segments intended for transmitting the user data information are transmitted via the packet-oriented communications network in data packets designed in accordance with the first ATM adaptation layer agreement. **(Duault shows AAL-1 packet format and further shows it can be used to carry user data in Figure 4 and Column 9, Line 20-40)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Song's apparatus to incorporate AAL-1 protocol, the motivation being as stated by Song in Column 2, Line 5 some form of adaptation is used in the CLAD and Duault specifies AAL-1 is best because it is preferred by PBX vendors and is considered as a tool kit with many optional functions including for multiplexing 64 kbits/ channels as stated in Duault's Column 4, Lines 41-55.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following US Patents are cited to show the state of the art with respect to multiplexing user data into structure blocks in ATM cells:

US Patent (6, 226, 294) to Caves

US Patent (6, 480, 494) to Hawley

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046.

The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HM
09-30-2005



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